AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (previously presented) A method for improving adhesion between two adjacent layers of a laminate membrane, comprising the steps of:

(a) forming a laminate having a first thermoplastic layer adhered to an adjacent second thermoplastic layer and having an interfacial boundary between the first thermoplastic layer and the second thermoplastic layer;

(b) after a lag time when the laminate is below a temperature at which significant diffusion across the interfacial boundary takes place, annealing the laminate at a temperature at least above 80°C above a thermal transition temperature of at least one polymeric component of at least one of the layers for a time sufficient for the at least one polymeric component to partially diffuse into the adjacent layer.

2. (cancelled)

3. (original) A method according to claim 1, wherein at least one of the first and second layers includes a semicrystalline polymeric component.

4. (original) A method according to claim 1, wherein the first layer is a thermoplastic elastomer layer and the second layer is a thermoplastic polymeric barrier layer.

5. (original) A method according to claim 1, wherein the laminate is annealed for at least about 15 minutes.

6. (original) A method according to claim 1, wherein the laminate is annealed for at least about 30 minutes.

7. (original) A method according to claim 1, wherein the laminate is annealed for at least about 40 minutes.

8. (original) A method according to claim 1, wherein the laminate membrane is annealed at a temperature above a thermal transition temperature of at least one component of each of the first and second layers.

9. (cancelled)

10. (original) A method according to claim 4, wherein the laminate is formed into a shape by blow molding before the annealing step.

11. (original) A method according to claim 10, wherein the annealing step is carried out within about 2 hours of the blow molding.

12. (original) A method according to claim 10, wherein the annealing step is carried out within about 1.5 hours of the blow molding.

13. (original) A method according to claim 10, wherein the annealing step is carried out within about 1 hour of the blow molding.

14. (original) A method according to claim 10, wherein the annealing step is carried out within about 30 minutes of the blow molding.

15. (original) A method according to claim 10, wherein the annealing step is carried out within about 15 minutes of the blow molding.

16. (original) A method according to claim 4, wherein the annealing step is carried out at a temperature of at least about 100°C.

17. (original) A method according to claim 4, wherein the annealing step is carried out at a temperature of up to about 150°C.

18. (original) A laminate formed according to the method of claim 4, wherein the first layer comprises a thermoplastic polyurethane prepared from a polyester diol and the second layer comprises an ethylene-vinyl alcohol copolymer.

19. (original) A laminate formed according to the method of claim 18, further comprising at least a third layer comprising a thermoplastic polyurethane prepared from a polyester diol that is adjacent to the second layer.

20. (previously presented) A laminate formed by a method for improving adhesion between two adjacent layers of a laminate membrane, comprising the steps of:

(a) forming a laminate having a first thermoplastic layer adhered to an adjacent second thermoplastic layer and having an interfacial boundary between the first thermoplastic layer and the second thermoplastic layer;

(b) after a lag time when the laminate is below a temperature at which significant diffusion across the interfacial boundary takes place, annealing the laminate at a temperature at least above 80°C above a thermal transition temperature of at least one polymeric component of at least one of the layers for a time sufficient for the at least one polymeric component to partially diffuse into the adjacent layer,

wherein the first layer is a thermoplastic elastomer layer and the second layer is a thermoplastic polymeric barrier layer.

wherein the first layer comprises a thermoplastic polyurethane prepared from a polyester diol and the second layer comprises an ethylene-vinyl alcohol copolymer, and

further wherein said blow molding step provides a bladder that is sealed and inflated after the annealing step.

21. (original) A ball comprising a bladder prepared according to claim 20.

22. (original) A shoe, comprising a bladder prepared according to claim 20.

23. (original) A laminate according to claim 20, wherein said polyurethane includes at least about 50 percent by weight of the polyester diol.

24. (original) A laminate according to claim 20, wherein said polyurethane includes at least about 60 percent by weight of the polyester diol.

25. (original) A laminate according to claim 20, wherein the polyester diol has a weight average molecular weight of at least about 2000.

26. (original) A method according to claim 1, wherein at least one of the polymeric components of at least one of the first and second layers has a glass transition temperature in the range of from about -30°C to about 20°C.

27. (currently amended) A method according to claim 4, wherein the thermoplastic elastomer layer comprises a material selected from the group consisting of polyurethanes prepared using polyester, polyether, and polycarbonate diols, flexible

polyolefins, styrenic thermoplastic elastomers, polyamide elastomers, polyamide-ether elastomers, polymeric ester-ether elastomers, flexible ionomers, thermoplastic vulcanizates, vulcanized EPDM in polypropylene[[;]], flexible poly (vinyl chloride) homopolymers and copolymers, flexible acrylic polymers, and combinations thereof.

28. (original) A method according to claim 4, wherein the thermoplastic polymeric barrier layer comprises a material selected from the group consisting of ethylene-vinyl alcohol copolymers, vinylidene chloride polymer, acrylonitrile polymer, copolymers of acrylonitrile and methyl acrylate, semicrystalline polyesters, polyethylene terephthalate, polyamides, crystalline polymers, epoxy resins based on N,N-dimethylethylenediamine andresorcinol, polyurethane engineering thermoplastics, and combinations thereof.

29. (original) A laminate according to claim 20, wherein the laminate has a gas transmission rate of less than about 6 cubic centimeters per square meter per atmosphere per day(cc/m^2-atm-day).